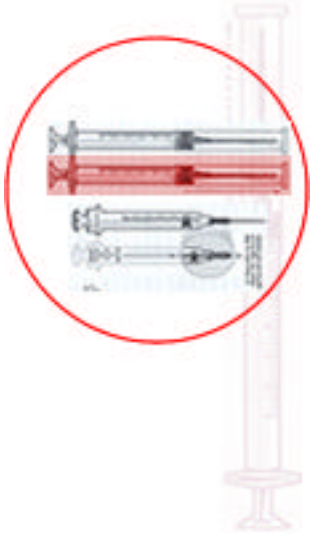
NIOSH recommends that health care facilities use safer medical devices to protect workers from needlestick and other sharps injuries. Since the passage of the Needlestick Safety and Prevention Act in 2000 and the subsequent revision of the OSHA Bloodborne Pathogen Standard, all health care facilities are required to use safer medical devices.

SAFER MEDICAL DEVICE IMPLEMENTATION IN HEALTH CARE FACILITIES

SHARING LESSONS LEARNED

NIOSH has asked a small number of health care facilities to share their experiences on how they implemented safer medical devices in their settings. These facilities have agreed to describe how each step was accomplished, and also to discuss the barriers they encountered and how they were resolved, and most importantly, lessons learned.



Phase 4 Report
Evaluating Safer Medical Devices

This nursing care center is a 500-bed JCAHO accredited long-term care facility that provides 24-hour care to psycho-behavioral and medically/physically handicapped residents with intermediate and skilled nursing care needs. Provision of care is accomplished by 600 employees in the following departments: Medical, Nursing (including Infection Control), Quality Improvement, Respiratory Therapy, Activity Therapy, Occupational Therapy, Pharmacy, Chaplaincy, Physical Therapy, Nutritional, Environmental, Education, Speech & Hearing, Social Work, Health Information, Supply, Volunteer, Physical Plant and Employee Health.

DEVICE DESCRIPTION

The sharps devices selected were the phlebotomy tray, five-quart and three-gallon sharps disposal containers. Devices were evaluated in six areas: three clinical units, Employee Health Services, Beauty and Barber services and Pharmacy Services. The composition of employees evaluating devices included nurses, pharmacists and barbers. The requested numbers of complimentary sharps disposal containers were delivered to the facility.

TRAINING

Infection Control Practitioners provided education to two of three employee shifts with instruction to educate night shift nurses, absent employees and agency staff. Instructional time encompassed 15 minutes with one-to-one and/or small group presentation in all respective clinical areas. At each presentation, colorful, eye-catching posters were placed on medication cabinet doors; new sharps disposal containers were assembled by the participants and the current sharps disposal containers were closed and placed in infectious waste rooms; evaluation tools in three different colors designated container sizes; large envelopes with clear instructions for completing evaluations were posted at eye level in prominent areas.

EVALUATION PROCESS

A two-week clinical trial period was determined by the Sharps Injury Prevention Team. At the end of this period, users were instructed to first determine numbers of times they used the container and record their responses and comments on a 12-statement questionnaire. Periodically, Infection Control Practitioners solicited on-site input relating to product successes or failures; and, following completion of the trial, we attempted to collect evaluations. Only a small number of evaluations were completed.

One-to-one and small group reminders were necessary to achieve completion of product evaluation; comparatively, a significantly higher participant response was attained.

ANALYSIS

The team had previously decided the evaluation tool used for screening would also be used by direct care staff during the clinical trial. A copy of the product evaluation is located at the end of this report. Following data collection, results of each criterion were tallied. The team met to discuss tally results.

Major concerns of team members regarding containers: 1) Users provided more negative than positive responses on evaluations for the medication cart; and there were more positive responses for the venipuncture container than negative ones. Ultimately, the team decided to purchase all containers from the same vendor; 2) Process versus product. Employees were blaming container for overfilling, when in reality they were not following procedure by securing the container when fill line was reached; 3) Fill line was not visible at eye level when placed correctly on the medication cart; 4) Even if container is overfilled and sharps'safety features were activated, injury would not occur.

Team consensus was to obtain a price comparison of current sharps disposal container versus trial container. Even though OSHA standards have to be complied with regardless of cost, price comparisons were obtained and presented at the next meeting for information. Although costs were comparable to the current sharps disposal container, the team voted that the current container would remain in use.

LESSONS LEARNED

To encourage completion of the evaluation, it may have been more productive to provide a motivational tool for employees.

Throughout this process, the team members felt it took longer than they expected; however, empowerment is a lengthy process as individuals/groups learn at variable times. During this experience, we observed hesitation for decision-making. With each successive product evaluation, the entire process may take less time in the future.

We were surprised that the product would not be implemented and other evaluators may need to be aware of their preconceived expectations.

STAFF HOURS AND OTHER COST ISSUES

Cost issues are broken down into two areas: materials and staff hours. Materials used for this step included computer, paper, long-distance phone calls, and vendors' sharps containers. Staff hours for screening the container are reflected in the following chart:

Type of Staff	Hours Spent on Phase IV
Team Coordinators	28
Management	3
Product Users	12
Total	43

PRODUCT EVALUATION – Sharps Disposal Container

Date: _____ Service_____ Shift_____

Item: Sharps Disposal Container – Medication Cart

Number of times container used: [ ] 0 [ ] 1-5 [ ] 6-10 [ ] 11-25 [ ] 26-50

PLEASE CHECK THE BEST ANSWER:	YES	NO	COMMENTS
1. Container is easy to use.			
2. Container allows one-handed disposal.			
3. Sharps can go into the container without getting caught on the opening.			
4. Container provides for puncture, leak and impact resistance.			
5. Fill level is provided and current fill status is readily visible.			
6. The opening prevents sharps removal.			
7. Container cannot be overfilled.			
8. It is safe to close the container without the danger of protruding sharps.			
9. The container closes securely under all circumstances.			
10. Would you recommend purchasing this container?			
11. Is there a container you would rather use?			If Yes, name of the container: _____
12. Were you provided in-service training on this product?			If yes, who did the training? _____